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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,462	11/21/2005	Reinhard Strey	04156.0016U1	2768
23859 7590 09/19/2008 Ballard Spahr Andrews & Ingersoll, LLP SUITE 1000 999 PEACHTREE STREET ATLANTA, GA 30309-3915				
EXAMINER				
CHANG, VICTOR S				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
09/19/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/540,462

Applicant(s)

STREY ET AL.

Examiner

VICTOR S. CHANG

Art Unit

1794

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-58 is/are pending in the application.
- 4a) Of the above claim(s) 29-32 and 36-58 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-28 and 33-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Introduction

1. Applicants' amendments and remarks filed on 9/8/2008 have been entered. Claims 25, 26 and 37 have been amended. Claims 25-28 and 33-35 are active.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. In response to the amendment to claim 25 to incorporate limitation from claim 27, the grounds of rejection have been updated as set forth below. In particular, the present Supplemental Office action includes the grounds of rejection of claim 27, which is inadvertently misspelled as "claim 28" in section 6 in the prior Office action mailed 7/8/2008.

Election/Restrictions

4. Applicants' are reminded that in a previous response filed 9/24/2007 "water" is elected as the first fluid species (K1), "ethane" as the second fluid species (K2), and "octaethylene glycol monododecyl ether" as the amphiphilic material (K3).

Rejections Based on Prior Art

5. Claims 25-28, 33 and 34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nielsen et al. [US 5419487].

Nielsen's invention relates to a water-borne coating composition (K1) and a compressed fluid dispersed therein (K2). The water-borne coating composition contains a water-soluble

polymer (liquid state of matter) [col. 6, ll. 46]. The compressed fluid is a supercritical fluid compressed fluid, such as ethane [col. 1, ll. 7-13]. The liquid compressed fluid phase is finely dispersed into the liquid mixture. Forming and maintaining the finely dispersed liquid compressed fluid phase (pools) in the liquid mixture may be aided by using a surfactant (K3) [col. 17, ll. 22-44].

For claims 25 and 34, Nielsen teaches in the Background section that it is known that upon decompression to a subcritical state, the compressed fluid expands and becomes gas [col. 2, ll. 39-41]. Since the expanded gas is enclosed and interfaced with the water-borne coating composition via the surfactant, it is inherently a foamed material. Further, the examiner takes Official notice that a surfactant is inherently an amphiphilic material comprising components (blocks) facing aqueous liquid and non-aqueous liquid. Nielsen teaches all the features of the claimed invention. Regarding the newly incorporated limitation “the average foam bubble size is smaller than 10 gm”, since the bubble size is recited as a transitional state from a nearly-critical or supercritical state to a subcritical state, and Nielsen teaches the same transitional state as claimed, the average foam bubble size is deemed to be either anticipated by the same chemistry during the transitional process, or obviously provided by practicing the invention of prior art.

For claim 26, Nielsen teaches that water is used to achieve low viscosity [col. 4, ll. 58-59].

For claim 27, Nielsen teaches in Example 1 a water-borne composition containing 45 w% water (K1). Nielsen is silent about the bubble density and total volume of the foam. However, since Nielsen’s supercritical fluid containing liquid mixture reads on all the features of the claimed invention, and the composition is processed through the same transitional state from a

nearly-critical or supercritical state to a subcritical state, the resultant features of the foamed material during the transitional process are deemed to be either anticipated, or obviously provided by practicing the invention of prior art.

For claim 28, since Nielsen teaches a water-borne coating composition (K1), its polarity is deemed to be inherently disclosed.

For claim 33, ethane is inherently a hydrocarbon.

6. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen et al. [US 5419487] in view of Anderson et al. [US 20050163924].

The teachings of Nielsen are again relied upon as set forth above.

For claim 35, Nielsen is silent about the composition of surfactant as octaethylene glycol monododecyl ether. However, Anderson's invention relates to various well known functionally equivalent surfactants including octaethylene glycol monododecyl ether [claim 6]. It would have an obvious substitution to one of ordinary skill in the art to use a well known alternative surfactant such as octaethylene glycol monododecyl ether, because the selection of a known equivalent material based on its suitability for its intended use supported a *prima facie* obviousness determination. See MPEP § 2144.07.

Response to Arguments

7. Applicants argue at Remarks page 8 that

"There is no description or other disclosure that describes the coatings as "foamed." If the coatings disclosed by Nielsen were intended to be a "foamed" material, then Nielsen has not characterized nor otherwise described the metes and bounds of the resulting foamed material."

However, claim 1 recites the “foamed” material obtained in a transitional state, and Nielsen teaches the same mixture being processed through the same transitional state, the transitional “foamed” material is deemed to be either anticipated by the same chemistry, or obviously provided by practicing the invention of prior art.

Applicants argue at page 9 that

“Nielsen discloses ... the compressed fluid is not used to form foam bubbles, but instead to create atomized droplets. Nielsen does not create a foamed material, but a spray carried to a surface by expanding gases that leaves a coating upon a surface once the water, solvent, and liquefied gas has evaporated.”

However, prior to forming atomized droplets, since the same chemical mixture necessarily being processed through the same transitional state, which is deemed to either anticipate, or obviously provide the claimed invention by practicing the invention of prior art. Applicants argument directed to Nielsen’s features not relied upon is unpersuasive.

Applicants argue at page 10 that

“The reasons that Anderson would select a surfactant for use in his compositions, is wholly different from the reasons that the Applicants would select a surfactant. Applicants do not remove their surfactant; however, Anderson does.”

However, since Anderson teaches functionally equivalent surfactant as claimed, it is a *prima facie* obviousness determination to one of ordinary skill in the art to select an alternative equivalent surfactant. Applicants’ argument directed to Anderson individually relating to features not relied upon is misplaced, there is no reason whatsoever to believe that the functionality of the surfactant is necessarily limited to the unrelated process features taught by Anderson.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S. Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 7:00 am - 5:00 pm, Tuesday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Victor S Chang/
Primary Examiner, Art Unit 1794